COLLEGE OF INFORMATICS

COMPUTATION = INFORMATION = COMMUNICATION

Bachelor of Science in: Data Science

For Students Following the:

Name: Student ID: Catalog Year:

2022-2023		Catalog Year:						
	SUPPORT COUR	SES (3 Hours)				OFFICE USE ONLY		
	Course	Pre-rea	Credits	Term	Grade	Approved Exceptions		
DI II 040		Sophomore Standing		Term	Grade	Successful PHI 310		
PHI 310	Information Ethics	or Instructor Consent	3			DSST		
	INFORMATICS CORE	COURSES (9 Hours)				OFFICE USE ONLY		
	Course	Pre-req	Credits	Term	Grade	Approved Exceptions		
INIE 400	Elementary Programming	MAT 102 or MAT 114			Grado	Successful INF 120		
INF 120	(or placement)	or placement	3			CPLE		
INF 128	Principles of Informatics	MAT 400 0	3					
INF 286	Introduction to Web Development	MAT 103 & pre-req or co-req of INF 110 or INF	3			Successful INF 286		
1141 200	·	120 or CSC 260				CPLE		
COMPUTER SCIENCE CORE COURSES (15 Hours) OFFICE USE ONL								
	Course	Dro ros	Credits	Tarm	Crada	Approved		
	Course	Pre-req MAT 103 & INF 110 or		Term	Grade	Exceptions Successful CSC 260		
CSC 260	Object-Oriented Programming I	INF 120 or CSC 270	3			CPLE		
CSC 360	Object-Oriented Programming II	CSC 260 &	3			Successful CSC 360		
	Database Programming	MAT 119 (≥ B-)			1	CPLE		
CSC 350 CSC 364	Data Structures and Algorithms	CSC 360 CSC 360	3					
		CSC 364 & STA 205,						
CSC 425	Artificial Intelligence	STA 205R or STA 250	3					
	MATH AND STATISTICS	COURSES (18 Hours	5)			OFFICE USE ONLY		
	Course	Pre-req	Credits	Term	Grade	Approved Exceptions		
MAT 128	Calculus A	MAT 119 (≥ B-)	3			EXOCOTIONS		
MAT 227	Calculus B	MAT 128	3					
MAT 228	Calculus C	MAT 227	3					
	OF		1		1	Successful MAT 129		
MAT 129	Calculus I	MAT 119 (≥ B-)	4			CLEP		
MAT 229	Calculus II	MAT 129 or MAT 227	5					
144 T 004	ANI							
MAT 234	Linear Algebra	MAT 228 or MAT 229 MAT 129 or Co-req	3					
STA 250	Probability and Statistics I	MAT 227	3					
STA 305	Intermediate Statistical Methods with R	STA 205 or STA 205R	3					
01A 303		or STA 250	_			OFFICE HOF ONLY		
DATA SCIENCE CORE COURSES (16-19 Hours) OFFICE USE O Approved								
	Course	Pre-req	Credits	Term	Grade	Exceptions		
DSC 101	Introduction to Data Science		1					
		INF 286, & STA 205 or						
		STA 205R or STA 250 & introductory programming						
DSC 200	Data Wrangling	(e.g. INF 120 or CSC 260)	3					
		& pre-req or co-req of DSC						
		101 or INF 282						
DSC 311	Data Analytics & Visualization	DSC 200 & STA 250	3					
DSC 411	Data Mining	DSC 311 & CSC 364 & STA 250	3					
DCC 404	Dia Data	DSC 411 & pre-req or						
DSC 421	Big Data	co-req of CSC 350	3					
DSC 496	Data Science Capstone	DSC 421 & co-req of	3					
BIO 292	Introduction to Research in Biology	BIO 292 or DSC 292 Instructor Consent	0					
OR	Saddion to recodulon in Biology							
DSC 292	Introductory Research Experience in DSC	Department Consent	0 - 3					
Studer	nts will select ONE of the following applic	ation areas to fulfill t	heir majo	r requirem	ents.	_		

BUSINESS INFORMATION SYSTEMS APPLICATION AREA (15 Hours) Pre-req Credits Term Grade BIS 275 Introduction to Business Analysis 3

OFFICE USE ONLY Approved **Exceptions**

BIS 300	Management Information Systems	Junior Standing or BUS 101 or BIS 275; & STA 212 or STA 205 or STA 205R or STA 250; & INF 101 or BIS 101 or Department Consent	3	_		Successful BIS 300 DSST
BIS 330	IT Project Management	BIS 275 or BIS 300	3			
BIS 384	Business Analytics	BIS 380 or DSC 311	3			
BIS 420	Business Intelligence & Enterprise Appl.	BIS 300 & Junior Standing & Certified Business or COI major or minor or Department Consent	3			
	GEOGRAPHIC INFORMATION SYSTEM	MS APPLICATION AR	REA (13 H	ours)		OFFICE USE ONLY
Course		Pre-req	Credits	Term	Grade	Approved Exceptions
GEO 415	Cartography	Sophomore Standing	3			
GEO 418	Geographic Information Systems	Sophomore Standing	4			
GEO 419	Remote Sensing of Environment	Sophomore Standing	3			
GEO 518	Geographic Information Analysis	GEO 418	3			
	BIOLOGICAL SCIENCES APPLI	CATION AREA (11-1)	2 Hours)			OFFICE USE ONLY
	Course	Pre-req	Credits	Term	Grade	Approved Exceptions
BIO 150 w/ BIO 150L	Introduction to Biology I and Laboratory	MAT 101 or Placement & co-req of BIO 150L	4			
BIO 151 w/ BIO 151L	Introduction to Biology II and Laboratory	BIO 150 & co-req of BIO 151L	4			
BIO 304 OR	General Ecology	BIO 150 & BIO 151	3			
BIO 349 w/ BIO 349L	Genetics and Laboratory	BIO 151 & CHE 121 (≥ C-) & co-req of BIO 349L	4			
Stu	idents will select TWO of the following co	ourses to fulfill their i	major red	quirements.		
	GUIDED ELECTIVES (6 es are offered for variable credit; you will need a r for a minimum of 0 DSC 494 may be repeated for credit towa	6 Hours) - Choose 2 minimum of two different 6 credit hours.	courses fro	om the electiv		OFFICE USE ONLY
	No more than 6 hours of DSC 392/399/492	· ·	•	•		
Course		Pre-req	Credits	Term	Grade	Approved Exceptions
ASE 230	Server-Side Programming	INF 286 & CSC 260 or CIT 383 (pre-req or co- req)	3			
CSC 362	Computer Systems	CSC 360	3			
CSC 402	Advanced Programming Methods	CSC 362 & CSC 364	3			
CSC 450	Database Systems	CSC 350 & CSC 364	3			
CSC 460	Operating Systems	CSC 362 & CSC 364	3			
CSC 464	Design & Analysis of Algorithms	CSC 364 & MAT 385	3			
CSC 482	Computer Security	CSC 362	3			
DSC 396	Data Science Practicum	DSC Major, Junior Standing & Department	0 - 3			
D3C 390	Data Science Fracticum	Standing & Department	0-3			

Students must have a grade of "C-" or better to meet pre-requisites for all courses unless otherwise indicated. Students must earn a grade of "C-" or better and a 2.00 GPA in all courses that apply to the major.

Consent STA 250, MAT 234, &

CSC 364

Varies with Topic

Department Consent

MAT 228 or MAT 229

MAT 228 or MAT 229

MAT 129 or MAT 227 &

STA 205 or STA 250

STA 205

STA 305

STA 305 or STA 316

or STA 341

STA 305

STA 250

STA 305 or any 300 level

STA course or Instructor

Consent

STA 250

Instructor Consent & STA

314 or STA 341

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DSC 431

DSC 494

DSC 499

MAT 325

MAT 329

MAT 375

STA 312

STA 316

STA 317

STA 327

STA 341

STA 360

STA 365

STA 370

Network Analysis

Differential Equations

Regression Analysis

Statistical Computing

Science

Calculus III

Statistics II

Advanced Topics: Data Science

Applied Mathematical Models

Elementary Survey Sampling

Categorical Data Analysis

Advanced Independent Study: Data

Introduction to Time Series Analysis

Statistics with Simulation & Resampling

Introduction to Statistical Consulting

Please consult with your advisor and the appropriate University Course Catalog for all other degree requirements.